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ABSTRACT

There is increasing interest in the relationship between social support, mental health and life stress. Research shows that social support is negatively correlated with symptoms of psychological distress. Yet knowledge about the dynamics of this relationship is limited. The effect of age, ethnicity and socio-economic status upon the relationship between social support, mental health and life stress was investigated to identify the relative importance of elements of social support for mental health status of different population groups. Data findings from interviews with about 400 randomly selected residents in two urban-ethnic communities showed that neighborhood attachment was the most important correlate of mental health status of elderly and ethnic populations, regardless of levels of life stress. Mental health status of younger adults and non-ethnics was related primarily to work satisfaction at time of low stress and to direct support from family, friends and co-workers at time of high stress. Findings suggest that neighborhood attachment should be enhanced and strengthened and that efforts should be undertaken to increase work satisfaction in the labor place. (Author)

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SOCIAL SUPPORT AND MENTAL HEALTH:

AN EXAMINATION OF INTERRELATIONSHIP

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ABSTRACT

There is increasing interest in the relationship between social support, mental health and life stress. Research shows that social support is negatively correlated with symptoms of psychological distress. Yet our knowledge about the dynamics of this relationship is limited. This paper examines: (1) the effect of age, ethnicity and socio-economic status upon the relationship between social support, mental health and life stress; (2) the relative importance of elements of social support for mental health status of different population groups.

Data findings from interviews with about 400 randomly selected residents in two urban-ethnic communities show that neighborhood attachment is the most important correlate of mental health status of elderly and ethnic populations regardless of levels of life stress. Mental health status of younger adults and non-ethnics is most related to work satisfaction at time of low stress and to direct support from family, friends and co-workers at time of high stress.

Findings suggest that neighborhood attachment should be enhanced and strengthened and that efforts should be undertaken to increase work satisfaction in the labor place.

In recent years there has been a growing interest in the relationship between social support and mental health. Research studies reviewed by Cobb (1976), Dean and Lin (1977), Kaplan, et al. (1977) and the President's Commission on Mental Health (1978) indicate that social support is an important correlate of mental health. These studies show that social support plays a major role in moderating the harmful effects of life stress such that at times of high stress, those having high social support are likely to experience low symptoms of psychological distress. However, our knowledge about the dynamics of the relationship between social support and mental health is still very limited. We do not know, for example, how this relationship varies by stress, age, ethnicity, and socio-economic status. We also do not know enough about the relative importance of different components of social support. The aim of the present study is to address these

gaps in our knowledge with specific attention to urban ethnic communities.

There are a number of operational definitions of social support that can be traced in the literature (e.g., Caplan, 1974; Weiss, 1974; Cobb, 1976; Kaplan, et al., 1977; Andrews, et al., 1978). One of the most recent and helpful definitions, however, is offered by Lin and Simeone (1979). According to them, "Social support is defined as support accessible to an individual through social ties to other individuals, groups, and the larger community" (p. 109). This definition, as do other definitions in literature (e.g., Andrews, et al., 1978), suggests that social support may consist of three distinct components. First, an individual may derive support from other individuals such as family, friends, and co-workers, etc. This component, as proposed by Andrews, et al. (1978), may be referred to as "direct support." Second, one may obtain support from groups through interaction and participation processes. This component may be termed "indirect support." Finally, individuals may derive support from the community through their attachments or feelings. Following Lin and Simeone's (1979) terminology, this component of social support may be called "social adjustment."

Thus, by its very definition, social support consists of varying components. Individuals may experience different degrees of attachment to each of these components depending on their socio-economic, cultural and demographic backgrounds. It is logical, therefore, to expect that the relationship between social support and mental health may vary by the importance individuals attach, consciously or subconsciously, to each component. Of course this relationship may also vary by levels of stress an individual may face, as social support in known to be specially significant at times of high life stress (Nuckolls, et al., 1972; Cassel, 1974; Kaplan, et al.,

1977). While there has been research examining each of these variables-components of social support, life stress, and socio-economic, cultural and demographic background, individual studies have tended to focus only on one or two variables (see reviews by Kaplan, et al., 1977; Dean and Lin, 1977; Hamburg and Killilea, 1979).

Nuckolls, et al. (1972) studied the joint effect of social support and life stress on the outcome of pregnancies. The data were obtained from 170 pregnant women between the ages of 18 and 29 of similar social class. Nuckolls, et al. found that taken alone, neither social support nor life stress had any significant effect on pregnancy complications. However, when considered jointly, they found that 91 percent of the women with high life stress and low social support had experienced one or more complications. The importance of joint effect of social support and life stress on mental health is also emphasized by Cassel (1974) and Kaplan, et al. (1977). While their studies are an important step forward, they did not take into account the effects of socio-economic, cultural, or demographic background.

Henderson, et al. (1978) and Andrews, et al. (1978) are two of the few studies which examined the relative importance of components of social support. Henderson and his colleagues, using a general population sample in Australia and building upon Weiss' (1974) work on provisions of social relations, found that the "available attachment" (an equivalent of direct support in the present study) explained the greatest amount of variance in mental health status. However, the authors did not control for levels of life stress. Also, the sample size in Henderson's study is relatively small for a multi-variate analysis (N=41).

Andrews and his colleagues (1978), who used a relatively large sub-urban population sample in Australia (N=863) and controlled for levels of

life stress, also found that direct support is the most important correlate of psychological well being. However, both the Henderson and Andrews studies did not control for individuals' socio-economic, cultural or demographic backgrounds.

Our review of the literature indicates that the relationship between social support and mental health in urban-ethnic communities in the U.S. has not been explored greatly. Lin and Simeone (1979) examined this relationship in an urban (Washington, D.C.) Chinese community. They found that neighborhood-based networks were by far the best indicators of social support and the contribution of social support to predicting mental health status was greater than that of life stress. However, they did not examine the relative importance of components of social support.

Thus, it can be seen from the above discussion that despite important contributions made by recent literature, our knowledge about the relationship between social support and mental health remains quite limited. The present study attempts to address some of these limitations. Using data from two urban-ethnic communities, the study examines: (1) the relationship between various indicators of social support and mental health controlling for levels of life stress and individuals' background; (2) the relative importance of different components of social support for different population groups; and (3) the interaction of social support and life stress.

Data and Method

The data used in the present study are derived from a random sample survey of residents of two urban-ethnic communities (N=400), the South Side of Milwaukee, Wisconsin, and South East Baltimore, Maryland. These communi-

ties consist of white, working-class ethnic neighborhoods, with most of the ethnic population descending from Southern and Eastern Europe. The sample consists of 27 percent first and second generation ethnics, and about 26 percent elderly. The average number of school years completed by the respondents is 9.2 and the median family income is approximately $12,000 per year.

The data was collected in 1977 by professionally trained interviewers as a part of The Neighborhood and Family Services Project, a four-year research and demonstration effort funded by NIMH, focused upon improving neighborhood and family life by identifying and rectifying help seeking and receiving obstacles.

The survey instrument consisted of about one hundred open and closed ended questions focusing upon various aspects of neighborhood and family life. The sections of the instrument most relevant to the present analysis focused on the following: mental health status (self-administered psychological symptom check list scale); relations with family, friends and coworkers; neighborhood interactions and organizational participation; activities in the neighborhood and neighborhood attachments; life crises events; and the respondents' background, such as age, ethnicity, income, education and other characteristics.

Measurement of Variables

Mental health status, the dependent variable, was measured by a symptom check list scale known as the SCL-90. This scale consists of 90 Likert-type items measuring frequency of various psychological symptoms. The scale consists of nine dimensions; namely, Somatization, Obsession-compulsion,

Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobia, Paranoia, and Psychoticism. These dimensions are combined into global indices such as the Positive Symptoms Index, Global Severity Index and the Positive Distress Index, with the dimensions and indices scored according to specific procedures outlined in a SCL-90 manual (see Derogatis, 1976). In the present analysis, we used the Global Severity Index as an indicator of an individual's psychological state because we found it to be more sensitive as compared with the other two indices.

Life stress was measured by Holmes and Rahe's (1967) Social Readjustment Rating Scale (SRRS). The SRRS is designed to measure the magnitude of life stress created by a certain life event. The score for each event is based on the perceived amount of adjustment required to cope with the event. The original scale consisted of over forty items but we have used only fourteen items in the present analysis. These items were selected on the basis that they measured the stress most uniformly, i.e., had the least standard deviations. The stress scores were categorized into high and low by taking the median as the cutting point.

Unlike the psychological symptoms and life stress scales, an adequate scale for social support is yet to be developed. Dean and Lin's conclusion in this regard may be worth mentioning. According to them:

> Social support is thus considered the most important concept for future study and it also presents the most difficult task for instrumentalization. A thorough search in the social and psychological inventories of scales has failed to uncover any measures of social support with either known and/or acceptable properties of reliability and validity. (Dean and Lin, 1977:408)

Our own review of the literature confirms that there is still no standard scale to measure social support (i.e., different authors have measured social support differently--Nuckolls, et al., 1972; Lin and Simeone, 1979, etc.). In the absence of a standard scale, we have attempted to measure social support using conceptual frameworks proposed by Andrews, et al. and Lin and Simeone.

Based on Breslow's (1972) quantitative approach to the World Health Organization's definition of physical, mental and social health and the work of Renne (1974), Andrews, et al. (1978) conceptualized social support in terms of direct support from the individual's relationship with other individuals and indirect support derived from interaction in the neighborhood and participation in community organizations. In the present analysis we have extended Andrews, et al.'s framework to include social adjustment components as proposed by Lin and Simeone (1979). The adjustment component is measured by feelings about neighborhood and work.

Social support in the present study is thus measured by three components: (1) Direct support from relationships with family, friends, and coworkers; (2) Indirect support from interactions with neighbors and organizational participation; and (3) Social adjustment as measured by feelings toward the neighborhood and work. Each of these components is measured by several indicators. We have used a total of twelve indicators of social support (Table 1).

Socio-economic, cultural and demographic background was measured in terms of ethnicity, education, income, and age. Residents of first and second generation Eastern and Southern European background were classified as ethnics. Education and income were combined to measure socio-economic status (SES) such that an individual having a college education or

income above $12,000 per year was classified as the high SES group; whereas the remaining sample was classified as the low SES group. Age was dichotomized into less than 60 years and 60 years and older. This categorization was mainly due to literature reporting weaker support systems and more symptoms of psychological distress for the elderly population.

The relationship between various indicators of social support and mental health was examined using zero-order correlations. In order to examine the relative importance of the components of social support, a score for each component was computed by a linear combination of its indicators. For example, "indirect support" component was measured by neighborhood interaction and organizational participation. It should be noted here that although "social adjustment" is labelled as one component, it has two distinct sub-components, work satisfaction and neighborhood attachment. It was decided to use the two sub-components separately in the subsequent analysis. The relative importance of each of the components of social support was then determined using multiple regression models (Table 2). The statistical significance of the interaction of life stress and social support was examined using Goodman's log-linear analysis (Goodman, 1972).

Results

Table 1 presents zero-order correlation coefficients between various indicators of social support and mental health status. Only statistically significant correlations ($p < .05$) have been presented. These correlations are presented for the overall sample as well as controlling for levels of life stress, ethnicity, SES, and age.

Focusing on the overall sample, the results in Table 1 show that being married, relationships with co-workers, work satisfaction and neighborhood attachment are significant correlates of mental health status. The negative correlation indicates that the higher the score on the indicators of social support, the lower is the score on the psychological symptoms scale. When controlling for life stress, the results in Table 1 show that relationships with co-workers and work satisfaction are positive mental health resources at times of low stress. Whereas marital status (family), friends in the neighborhood, organizational participation, length of residence and homeownership (residential stability) are significant correlates of mental health at times of high stress. Satisfaction with neighborhood is significantly correlated with mental health status at both low and high levels of stress.

It can be seen from Table 1 that neighborhood attachment is of great significance for ethnics especially at high life stress. Among other indicators of social support for ethnics, neighborhood interaction is significant at low stress whereas friends in the neighborhood and work satisfaction are significant at high stress. For the non-ethnics at times of low stress, work satisfaction and satisfaction with neighborhood are significant; whereas at times of high stress being married, relationships with co-workers, organizational participation and work satisfaction are significant. It should be noted that for non-ethnics, the magnitude of the correlation coefficients are considerably less than for ethnics.

Examining the correlations between social support and mental health status by levels of stress and age, the results in Table 1 show that for the elderly, neighborhood attachment, loyalty to the neighborhood and satisfaction with the neighborhood are significant at both low and high stress.

For young adults, 18-59 years of age, at times of low stress, work satisfaction and satisfaction with neighborhood are important; whereas at times of high stress, being married, organizational participation and residential stability are important correlates of mental health status. Relationships with co-workers for this sub-group are important regardless of levels of stress. Again, the magnitude of the correlations are considerably lower than for the 60 and over population.

Focusing on the correlation between indicators of social support and mental health controlling for life stress and socio-economic status, the results show that for the low SES group, mental health status is mainly related to residential stability, regardless of levels of stress. For the high SES group, at times of low stress, being married and work satisfaction are significantly correlated with mental health status; whereas at times of high life stress, friends in the neighborhood are significantly correlated with mental health status. Neighborhood satisfaction is significant correlate of mental health status, at both levels of life stress for the high SES group.

Thus, Table 1 shows that neighborhood attachment elements are significant correlates of mental health status for ethnics and elderly in urban neighborhoods. While the neighborhood literature has shown that neighborhoods are important resources for elderly and ethnics, there has been little empirical evidence to date demonstrating the relationship between neighborhood attachment and mental health. The results of the present analysis indicate that negative mental health consequences of metropolitanization can perhaps be reduced if the importance of neighborhood is acknowledged and efforts increased to enhance neighborhood viability in urban areas.

It can be noted from Table 1 that the living alone indicator of social support has no significant relationship with mental health status. Generally, one would expect that people living alone might be lonely and be at greater risk for developing mental health problems. But, as Lin and Simeone (1979) have pointed out, with changing life styles and increasing ability of individuals to adapt to new situations, it may be logical to expect that living alone is no longer a significant correlate of mental health status.

The Relative Importance of the Components of Social Support

The next step in the analysis was to examine the relative importance of the components of social support. This was done using multiple regression models. Table 2 presents the standardized regression coefficients (Beta-Values) which can be compared within each column. Each column represents a sub-population group. Table 2 also presents the total variance explained (R-squared) by all components of social support within each sub-group. These values can be compared across sub-groups (bottom row) to determine the goodness of each model.

Table 2 shows that among the low SES group, ethnics and elderly, neighborhood attachment has the most important effect on mental health status regardless of levels of life stress. Among the high SES group, non-ethnics and younger populations, the relative importance of components of social support varies by levels of life stress. At low stress, the work satisfaction component of social support has the most important effect on mental health status; whereas at high stress the direct support component has the most important effect.

Focusing on the variance explained by each model, it can be seen from Table 2 that the model is most relevant to ethnics at high life stress (R^2=29.2%). The model in general is more relevant to ethnics and elderly than other population groups examined in the present analysis. It is

interesting to note that for the elderly, the model explains more variance at low stress than at high stress which we would not expect from previous research findings. To ascertain that the relative effects of the components of social support were not spurious, we introduced further controls. The relative importance of components of social support among ethnics, for example, was examined controlling for age and SFS. However, due to small sample size, levels of stress could not be used as a control variable. The results of this analysis indicated that neighborhood attachment components still has the most important impact on mental health status among ethnics and elderly even when we controlled for other variables. However, the neighborhood attachment among the low SES group was no longer important when we controlled for age and ethnicity. This suggests that the effect of neighborhood attachment on mental health status by SES may be spurious.

It is also apparent from Table 2 that the low SES group, ethnics, and elderly constitute a homogeneous sub-population. For each of these groups, the patterns of effects of the components of social support on mental health are similar. Similarly the high SES group, non-ethnics and younger adults, also constitute a homogeneous sub-population; thus the subsequent analysis focuses on these two sub-populations.

Interaction of Social Support and Life Stress

As mentioned earlier, previous literature has emphasized that the interaction of social support and life stress is important for individuals' mental health status. The results of present study show that this may only be true for certain population groups. Table 3 presents the results from a discrete multi-variate analysis. Model 1, in the table, is relevant to the low SES group, ethnics and elderly; whereas Model 2 is relevant to the

high SES group, non-ethnics and younger population. The results show that the interaction of social support and life stress is only significant for the latter sub-population ($p \leq .05$).

Table 3 also presents main effects of social support and life stress on mental health. Focusing on Model 1, it can be seen that both social support and life stress have significant effects on mental health status. The effects of social support on psychological symptoms is negative, whereas the effect of life stress is positive. This can be seen from the percent change in value of γ, which is the equivalent of the B-value in ordinary regression analysis. The magnitude of variations in γ-effects suggests that for the low SES group, ethnics and elderly, social support may have a direct effect on mental health.

Focusing on Model 2, which is relevant to the high SES group, non-ethnics and younger populations, we see that the magnitude of the effects of social support and life stress are almost equal and statistically insignificant. For this sub-population, social support serves as a buffer against the harmful effects of life stress (the interaction of social support and life stress is significant).

Discussion/Policy Implications

The results of the present study have shown that social support is indeed a positive mental health resource. We have seen that various indicators of social support are significantly correlated with positive mental health status. This finding is not unique as a number of previous studies have reported a negative correlation between social support and psychological distress (Cobbs, 1976; Dean and Lin, 1977; Hamburg and Killilea, 1979).

The present study, however, unlike most previous research, has examined how the relationship between various indicators of social support and mental health status varies by levels of stress and individuals' socio-economic, cultural and demographic background.

Kaplan, et al. (1977), building upon the theoretical foundations of Cassel (1974) argues that social support is only important at times of high life stress. We find that when individual indicators of social support are examined in relation to mental health status, social support is important even at low levels of stress. Thus social support may have a direct relationship upon mental health status regardless of levels of stress. This is especially true concerning the neighborhood attachment indicators of social support.

Henderson, et al. (1978) and Andrews, et al. (1978) suggested that direct support from other individuals--family, friends, co-workers, etc.--is the most important component of social support affecting individuals' mental health status. We find only partial support for this finding, with direct support being the most important social support component only among the high SES, non-ethnic and non-elderly populations.

Our finding of the importance of neighborhood attachment in white urban ethnic communities is supported by Lin and Simeone's (1970) research in the Chinese community. This suggests that the neighborhood's importance to urban populations transcends racial and cultural differences. The importance of neighborhood attachment in these communities may be a reflection in part of the large proportion of elderly population in these areas. The neighborhood literature has shown that neighborhood is extremely important in the lives of the elderly, more so than for other age groups (Mann, 1970; Risling, 1976; Biegel and Sherman, 1979).

As we have stated earlier, there is no agreed upon scale to measure social support. Thus differences between our findings and previous research may partially be a reflection of differences in measurement of this variable. Differences may also be due in part to variations in sample characteristics and in the measurement of mental health status.

Our finding that different social support elements are of varying levels of importance for particular population groups suggests that multiple strategies and approaches are needed in health promotion programs aimed at strengthening social support systems. For example, for some population groups, strengthening primary relationships and support systems at the workplace will be most important, while for others, strengthening neighborhood-based support systems will be most critical.

Lately there has been increasing recognition of the importance of the workplace as a social support system. Gottlieb (1980) discusses recent initiatives by business, labor, and government aimed at increasing work satisfaction and strengthening workplace support systems. Growing numbers of social workers are now being employed by private industry and the National Association of Social Workers recently held the first national conference on industrial social work. Because of the importance of work satisfaction to positive mental health status, efforts must be continued to enhance workplace support systems through participatory management, flex-time, and employee counselling and benefit programs.

The neighborhood is an unrecognized and underutilized mental health resource. In fact, too often professional mental health and human service programs tend to be "parachuted" into neighborhoods and bypass those organizational and cultural networks that have the capacity to support people in

need. Efforts to enhance neighborhood attachment must empower residents and create linkages between neighborhood-based organizations and professional agencies. The neighborhood must be seen not only as a locus for service delivery but also as a system of already existing helping networks that should be strengthened and enhanced instead of being bypassed and undermined.

Table 1

CORRELATION BETWEEN MENTAL HEALTH STATUS AND SOCIAL SUPPORT

by Stress, Ethnicity, Age and SES

Indicators of Social Support	Overall	Ethnicity						Age				SES			
		Overall		Ethnics		NonEthnic		Elderly		Others		Low		High	
Direct Support	(363)	LS (183)	HS (180)	LS (53)	HS (51)	LS (130)	HS (129)	LS (48)	HS (50)	LS (130)	HS (125)	LS (60)	HS (66)	LS (123)	HS (114)
1. Married	-.112	---	-.130	---	---	---	-.154	---	---	---	---	---	---	-.159	---
2. Living alone	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3. Friends	---	---	-.128	---	-.269	---	---	---	---	---	---	---	---	---	-.168
4. Co-Workers	-.106	-.118	---	---	---	---	-.188	---	---	-.173	-.178	---	---	---	---
Indirect Support															
1. Neigh. interaction	---	---	---	-.236	---	---	---	---	---	---	---	---	---	---	---
2. Org. participation	---	---	-.129	---	---	---	-.147	---	---	---	-.142	---	---	---	---
Social Adjustment															
1. Work satisfaction	-.132	-.191	---	---	-.304	-.196	-.168	---	---	-.235	---	---	---	-.145	---
2. Neigh. Attachment															
(i) Neigh. Real Home	-.095	---	---	---	-.251	---	---	-.343	---	---	---	---	---	---	---
(ii) Loyal to Neigh.	---	---	---	-.238	-.346	---	---	-.454	-.274	---	---	---	---	---	---
(iii) Sat. w/Neigh.	-.211	-.267	-.152	-.332	-.267	-.243	---	-.491	-.247	-.486	---	---	---	-.325	-.197
(iv) Length of Resid.	---	---	-.144	---	-.266	---	---	---	---	---	-.168	---	-.227	---	---
(v) Own Home	-.157	---	-.118	-.282	-.393	---	---	---	---	---	---	-.235	-.204	---	---

Key: LS = Low Stress
HS = High Stress
( ) = Sample

Table 2

The Effects (B-Values) of Components of Social Support upon Mental Health Status by Stress, Ethnicity, Age and SES

Components of Social Support	Ethnicity				Age				SES				Overall
	Ethnics		NonEthnic		Elderly		Others		Low		High		
	LS	HS	LS	HS	LS	HS	LS	HS	LS	HS	LS	HS	
Direct	.153	.187	.014	.187	.172	.058	.089	.244	.008	.102	.135	.195	.115
Indirect	.080	.143	.037	.068	.055	.05	.003	.086	.053	.069	.09	.08	.014
Social Adjustment													
Work Satisfaction	.035	.201	.189	.092	.10	.03	.223	.005	.138	.022	.186	.028	.088
Neighborhood Attach.	.310	.471	.089	.005	.354	.327	.011	.039	.219	.266	.03	.094	.139
% of Total Variance Explained	25.4	29.2	4.7	7.0	17.2	11.2	6.4	8.3	8.7	7.8	7.0	7.3	5.4

Key: LS = Low Stress
HS = High Stress

Table 3

Effects and Interactions (Goodman's γ's) of Social Support and Life Stress Among Ethnics, Elderly and Lower Class, and Non-Ethnics, Younger Adults and Higher Class

Effect/ Interaction		Model 1: Ethnics, Elderly & Lower Class γ-Effects	Model 1: % Change in γ	Model 2: NonEthnics, Younger Adults & Higher Class γ-Effect	Model 2: % Change in γ
Mean (U)		1.29*	--	1.72*	--
Stress (T)	Low	0.82*	49	0.88	28
	High	1.22*		1.13	
Soc. Sup. (S)	Low	1.53*	-57	1.19	-29
	High	0.65*		0.84	
Interaction (T x S)		0.95		0.71*	

*Sig. at $p < .05$

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